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|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 10/801,458             | KINZER, DWIGHT ERIC |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Quang T. Van           | 3742                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 12/01/2005.
2. ☒ The allowed claim(s) is/are 1-15, 17, 19-21 and 27-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

  
 Quang T. Van  
 Primary Examiner  
 Art Unit: 3742

### **REASON FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance: allowance of claims 1-15, 17, 19-21, 27-30 is indicated because the prior art of record does not show or suggest the steps of measuring an effective load impedance initially dependent upon the impedance of said medium comprising hydrocarbonaceous material selected from the group consisting of oil shale, tar sand, oil sand, coal, bitumen, and/or kerogen; comparing said effective load impedance with an output impedance of a signal generating unit that generates said radio frequency waveform; and automatically adjusting said effective load impedance to match said output impedance of said signal generating unit as recited in claims 1-15, 17; the steps of maintaining hydrocarbonaceous material, selected from the group consisting of oil shale, tar sand, oil sand, coal, bitumen, and/or kerogen, in an alternating current electrical field provided by a radio frequency signal at a frequency not greater than 300 MHz; and controllably heating said hydrocarbonaceous material by automatically maintaining an impedance match between an impedance of said hydrocarbonaceous material and a predetermined constant as recited in claims 27-28; the steps of measuring an effective load impedance initially dependent upon the impedance of said medium comprising hydrocarbonaceous material contained in a subterranean environment; comparing said effective load impedance with an output impedance of a signal generating unit that generates said radio frequency waveform; and automatically adjusting said effective load impedance to match said output impedance of said signal generating unit as recited in claim 29; the

steps of exposing said medium, comprising hydrocarbonaceous material, to a subterranean reservoir of a carrier medium, said carrier medium being a fluid which allows radio frequency waves to travel to said medium; measuring an effective load impedance initially dependent upon the impedance of said medium; comparing said effective load impedance with an output impedance of a signal generating unit that generates said radio frequency waveform as recited in claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*QV*

QV

December 22, 2005



Quang T Van  
Primary Examiner  
Art Unit 3742